Early Purchaser Involvement in Open Innovation- the case of an advanced purchasing function triggering the absorption of external knowledge in the French automotive industry

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Summary: This paper investigates the mechanisms that trigger the absorption of external knowledge in an innovative French automotive firm. An ethnographic-inspired study conducted by an academic embedded within the Innovation Purchasing Department has enable us to present a rare and new function of Purchasing that plays an important role between potential new suppliers and Research and Development personnel.

Keywords: Open Innovation, Early Purchasing Involvement, Research-based observations, Intermediation, Absorptive Capacity.

1. Introduction

Innovation of products, services and business models is increasingly identified by firms as an important strategy to achieve competitive advantage. Nowadays, the turbulent economic environment and rapid changes in the development of new products are some of the reasons for identifying and assimilating external knowledge to reinforce and accelerate internal innovation projects (Noblet and Simon, 2010; Phillips et al., 2006; Zahra and George, 2002). Within this changing innovation landscape, an "*Open Innovation*" approach has become a major theme across companies worldwide. Chesbrough in his seminal work on Open Innovation suggests that, in a world of widely distributed knowledge, companies cannot afford to rely entirely on their own research, but should use external channels to get new ideas/technologies to markets (Chesbrough, 2003). However, a key challenge of an Open Innovation approach is to recognize the value of new, external information, assimilate it, and apply it to commercial ends. This corresponds to the well-known definition of *absorptive capacity* by Cohen and Levinthal (1990) i.e. the ability of an organization to appropriate external knowledge in order to transform it into new products. Thus, the specific context of an Open Innovation approach in projects may have an impact on the departments involved in a cross-functional innovation project team, particularly in the departments managing external resources.

Several organizational functions interact with suppliers. Traditionally, the purchasing department has not been involved in innovation projects but more and more companies realize the advantages of involving purchasing in this role. Purchasing can help to ensure that technologies and components can be sourced, at low cost, high quality and from reliable suppliers (Calvi et al., 2010; Johnsen, 2009; Schiele, 2010). In this way, the purchasing department works as an intermediary function based on its knowledge of the supplier market. It often takes the role of a relationship manager to achieve successful supplier involvement in product development projects (Dowlatshahi, 1992). This role includes, for example, motivating suppliers to collaborate and monitor, interpret and distribute information on individual suppliers and supplier markets (Wynstra et al., 1999). The purchasing's unique knowledge of the supply market and its interactions with other functions involved in the

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innovation process gives to the purchasing department a unique opportunity to facilitate the transfer of both supply needs and supplier needs. Crozier and Friedberg define such an intermediation role as "*marginal-secant*" i.e. "*the position of an actor that is the stakeholder of different systems of action, playing the role of a go-between and interpreter*" (Crozier and Friedberg, 1977, p. 86). The concept of *absorptive capacity* developed by Cohen and Levinthal (1990) gives an interesting guideline to analyze this pivotal role challenge for Purchasing (Johnsen et al., 2012). Little research focuses on understanding the internal work of purchasing in innovation projects. Indeed, few empirical research studies have been done in understanding the changes and trends affecting purchasing with research-based observations (Dhanaraj and Parkhe, 2006; Gardet, 2009; Trent and Monczka, 1998).

The aim of this research is to understand how Purchasing in this Open Innovation approach may have an important role within this cross-functional team in launching Absorptive Capacity Process (ACAP). For doing this, the paper begins by defining the process of Absorptive capacity and identifying the role of an advanced purchasing function in Open Innovation. This is followed by the presentation of the research setting: the role of the studied unit within our sample in the French automotive firm. The details of our data collection and analysis linked to ethnographic-inspired method are presented. Then we narrate how ACAP is triggered and analyze the mechanisms activated by the Innovation Purchasing Department. Finally the paper concludes by discussing our first results on how the role of Purchasing can contributes at an early stage to the innovation process.

2. Literature background

2.1. Absorptive capacity

Cohen and Levinthal in their seminal article of 1990 define Absorption Capacity (ACAP) as "*the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends"* (Cohen and Levinthal, 1990). They also underlined how much this absorption capacity was critical for the innovation capacity of a firm. Since then, the notion of ACAP is widely used and explored in different area of management sciences and is a reference for the Open Innovation literature (Dahlander and Gann, 2010). As it focused specifically on internal functional requirements for managing external collaboration, ACAP is considered suitable for analyzing the role of purchasing in the innovation process (Johnsen et al., 2012).

Furthermore, the work on the innovation intermediaries suggests that by facilitating the transfer of knowledge between organizations, they can increase both the ACAP of the recipient company and the extent of its knowledge base (Jansen et al., 2005; Meyer, 2010; Whelan et al., 2011). From an "*organizational network analysis*" of a triggering sequence of ACAP, Whelan et al. (2011) have emphasized the role of both types of innovation intermediaries in an ACAP sequence: the idea scout who identifies and exploits external knowledge and the idea connector who identifies the relevant internal colleagues that are best equipped to convert this knowledge into an innovative outcome and that will hold such a task.

Triggers are "*events that encourage or compel a firm to respond to specific internal or external stimuli*" (Zahra and George, 2002). These triggers are also envisaged in terms of incentives to collect and share knowledge (Cohen and Levinthal, 1990; Zahra and George, 2002). But, because of the difficulty in observing, little research has focused on these triggers when they relate to a specific sequence of ACAP (Imbert and Chauvet, 2012). These authors have identified four mechanisms implemented by an external actor facilitating the initiation and development of a sequence of knowledge absorption in a recipient organization. These

mechanisms activated externally are: (1) adopt knowledge, (2) select knowledge, (3) contextualize the knowledge and (4) preserve it.

2.2. Purchasing involvement in Open Innovation

In the literature, we found that purchasing's involvement in Open Innovation might require a intermediation role that identifies and evaluates a large number of new product ideas (Schiele, 2010). Several studies have shown that in an Open Innovation environment, suppliers are knowledge sources that are almost as important as customers (Schiele, 2006). Thus, purchasing resources are assessing the availability and suitability of these external sources (suppliers) for integration in the innovation process (Wynstra et al., 1999). Purchasing managers might recognize the value of knowledge in today's competitive marketplace and take specific steps for their firm to access and acquire it (Trent and Monczka, 1998). For that, it must be further recognize that particular individuals within a purchasing function may be assigned to different activities such as planning, supplier analysis, expediting or engineering liaison.

2.2.1. Managing supplier integration in innovation projects

Research shows that there is a need for the management of advanced supplier selection process to create supplier relationships with high levels of trust and commitment to collaborate in innovation projects at an early stage (Johnsen, 2009). Therefore, it can be argued that the management of advanced supplier selection process for innovation projects is a main challenge of purchasing in innovation projects. The reason is that the question is not involving all suppliers earlier –but the right suppliers (Clark and Fujimoto, 1991; Petersen et al., 2005).

Managing the involvement of suppliers in New Product Development (NPD) enables buying firms and key suppliers to collaborate effectively for innovation (Johnsen, 2009; Petersen et al., 2005; Van Echtelt et al., 2008). Supplier involvement may range from giving minor design suggestions (e.g. to improve a component's manufacturability) to being responsible for the complete development, design and engineering of a specific part or sub-assembly (Le Dain et al., 2011; Wynstra and Pierick, 2000). Suppliers who are involved in new product development need to be selected and evaluated according to their innovative capability and/or their complementary know-how. The inclusion of suppliers in an in-house design process of innovation projects therefore involves both technical and commercial issues.

For doing so, prior literature have observed a possible distinction between a department that is integrated into all New Product Development projects while a strategic sourcing department that has a stronger commercial focus and a connection with internal customers (Schiele, 2010). A purchasing unit: "advanced (or forward) sourcing" is dedicated to scout innovative supplier resources and separated from the other units dedicated to "life cycle (or strategic) sourcing".

2.2.2. Managing internal coordination between R&D and innovative supplier

The need to consider internal actors within the firm involved in Open Innovation suggests that the ability to manage supplier relationships begins by developing the ability to manage internal cross-functional relationships (Johnsen, 2009). Existing research has acknowledged the positive effect of cross-functional integration of the purchasing and R&D departments in problem-solving activities (Clark and Fujimoto, 1991) and on the development of coordination capabilities (Takeishi, 2001). In order to do so, Ben Mahmoud-Jouini and Calvi describe the role of purchasing as a facilitator that completes the heavyweight project

manager and plays a pivotal role between external and internal systems (Ben Mahmoud-Jouini and Calvi, 2004).

For instance, Purchasing in collaboration with R&D in innovation development may provide many helpful services but the success of this collaboration depends on both departments. One of the reasons is that the R&D department, when unsure of the role that purchasing can play in the innovation process (Atuahene-Gima, 1995; Brattström and Richtnér, 2013; Herzog, 1974), may refuse to consider alternative suppliers from the purchasing department, thus restricting purchasing's search for the best acquisition (Herzog, 1974). Even when the R&D department does involve the purchasing department in the design cycle it not may do so early enough for purchasing to get the best supplier involvement.

The early involvement of suppliers in new product development may have been well studied. But, how the Early Purchasing Involvement may have a role in the involvement of supplier before the launch of an innovation project is still unclear in research.

2.3. Research question

In this paper we are looking to understand the new challenges of purchasing in an Open Innovation intermediation role through the mechanisms that facilitate the initiation and development of new innovation projects leveraging external knowledge. Our research question is: *what are the mechanisms activated by an advanced purchasing function involved in Open Innovation that may trigger a sequence of absorption of new and external knowledge for a recipient organization?*

3. Research method

As the objective of this communication is to study the very first steps of an absorption sequence in a continuous process of inbound open innovation, it is done by focusing on the active triggers of an ACAP through the unique point of view of an actor within the receiving organization: an innovation purchaser. Data collection was done thanks to a participating-observation within the Innovation Purchasing Department of a division of a French automotive tier-one supplier. This case study can be considered relevant as the automotive industry is an industry where the management of external knowledge is critical for developing the innovation capacities of firms (Ben Mahmoud-Jouini et al., 2007; Calvi, 2000; Johnsen et al., 2011; Lenfle and Midler, 2002; Midler et al., 1997; Takeishi, 2001). The data was analyzed by focusing on the approach developed by this department to identify new innovative suppliers and potential innovations leveraging external knowledge.

3.1. Research settings

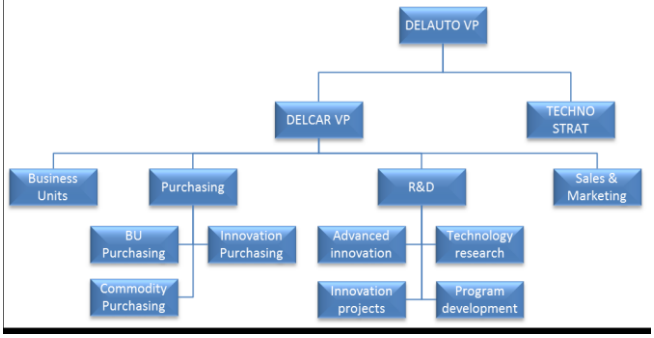
3.1.1. The organization

The DELAUTO group (pseudonym) is one of the top automotive tier-one suppliers. Its independent divisions are in charge of producing different parts or modules of cars. Within DELAUTO, the DELCAR division represents a third of the general turnover and employs around 40% of the worldwide staff. DELCAR is an international leading producer of a key automotive part. The purchasing function plays a strategic role for DELAUTO as its annual purchases amount to nearly 60% of net sales value.

DELCAR is organized in regional and product business units supported by functional departments in which are "Research and Development" and "Purchasing" [Figure 1]. Research and Development department includes the Advanced Innovation Department which

is in charge of generating Breakthrough Innovation projects, Technology Research Department is in charge of reinforcing the existing technological capabilities of DELCAR, Innovation Projects Department which up to the stage of transfer to the Program Development Direction that prepares and launches the industrialization of "*customer awarded program*". The Purchasing Department is divided into the "life-cycle sourcing" function (Business Units and Commodities Purchasing Directions), and the "advanced sourcing" function (Schiele, 2010): the Innovation Purchasing Direction which is the function we are studying.

Figure 1: DELCAR's organization chart



In DELCAR, the perimeter of innovation is about new products, services, technologies and production and supply organizations or processes, which is positioned "*ahead of customer awarded program"*: before any contractual sales agreement with automotive carmaker. This innovation is managed by a 5-phase stage gate process (Cooper, 1990), from ideation to the transfer to Program Development teams. Every gate review is presented by the Innovation Project Manager to representatives of Technology research that bring their expertise, Sales & Marketing Managers and Innovation Purchasing Managers; managers from BU and life-cycle sourcing are invited but rarely presents.

The creation of a new innovation project is performed by the validation of the first gate by the review committee. The innovative ideas presented, as potential new innovation projects, can come from inside or outside DELCAR. Being a creative supplier in automotive (Kesseler, 1998), DELCAR is used to sharing its innovation with its clients; DELCAR's Not Invented Here syndrome is low. As though, the scouting of external ideas from outside is extended: many internal actors have a part to play. These actors include: the Innovation Purchasing Direction, the Advanced Innovation Direction, the Experts from Technology Research Direction, the members of Innovation Projects and sometimes Life-cycle Sourcing purchasers.

3.1.2. The role of the observed actor: the advanced-purchaser

The Innovation Purchasing Direction of DELCAR manages the implication of external organizations in co-innovation projects. Based nearby Research and Development offices, with a facilitated access to innovation restricted areas, the Innovation Purchasing Direction makes internally the interface between R&D and other Purchasing entities. The Innovation Purchasing Department has the role to scout, select and follow-up external organizations that can bring in extra innovation capabilities to DELCAR. Innovation Purchasers' scouting for new suppliers is realized both to respond to expressed demands from NPD projects or technology roadmaps, and spontaneously. The targets of this prospection, when not specified,

R&D Investment Purchasing job description since 2006 – abstract of advanced purchasing functions

- Support the R&D organization to find and select the right supplier in line with the global purchasing strategy
- Identify potential partners for new needs:
  * Prospect new suppliers with support from commodities
- Activate idea generation from suppliers with support from commodities
- Contribute to technological survey
- Work in network with R&D, Marketing, Commodities, Legal
- Be a permanent member of the Innovation Committee

are external organizations that can bring to DELCAR innovative ideas that can make the automotive part lighter, cheaper to produce and give extra comfort for car passengers.

The scouting for external ideas is not only focused on NPD targets but also on innovations in process or organizational methods. The target can be either incremental or radical innovation – the external knowledge can either reinforce or disrupt DELCAR's knowledge and competence regarding both its commercial links and technologies. Moreover, the selection is not only on new innovative ideas. There is a need to couple an innovative idea with an external organization holder of knowledge that can at least accompany DELCAR in the development, the assimilation and the application of this innovative idea. Innovation Purchasing is looking for dyads {idea-supplier}.

The scouting is done through participations to professional fairs, business meetings and classical economic intelligence. The participation at such events is chosen according to the proximity of the sector and of the technology used or potentially used in automotive industry. For example, the exploration of Innovation Purchasing is also done within the aerospace sector or around nanomaterial. A specific demand for innovation sourcing for one NPD project is officially recognized by DELCAR through the production of an "*Innovation idea from supplier*" form. This form has to be endorsed by Innovation Purchasing and one R&D manager. This is the first step in the DELCAR process for a new co-innovation project or the Stage 0 of the innovation management process. The Innovation Purchasing functions extend beyond this role of scouting: in case of a need for external knowledge for an existing innovation project, its role is to accompany the R&D and Marketing Departments for selecting and contracting with suppliers.

3.2. Data collection

Data collection was realized through a 16-month participating-observation done by one author (and still on-going). Inspired by ethnographic methodology, participating-observation is a source of evidence for case studies positioned between direct observation and participant-observation (Yin, 2009, p. 102). It specifically differs from this last one because the role of the researcher is more active on the ground of study, its participation to the life of the studied organization is not marginal and is a large part of is observed (Donada and Mbengue, 1999; Gold, 1958). The participating-observant was both identified as an actor of the organization and as an academician – he forms a part of his ground of study. As an academician integrated of the Innovation Purchasing Direction 2 days a week, one author was assuming various roles in a situation of case study and was participating to the studied events (Yin, 2009).

This methodology allows a direct and "real-life" access to the events that should not be possible by other means (Yin, 2009). By adopting the point of view of an actor of the case study, this type of data collection allows to get a high degree of freedom to investigate the studied phenomenon (Donada and Mbengue, 1999, p. 239). The data collected is made of a research notebook that chronologically compiled the notes taken by the participating-researcher, the exchanged emails (received and sent) including the attached documents and copies of screen. The notes describe the main interactions related to the studied cases: the meeting reports, both internal and external, as the remarks exchanged at the coffee machine. The biases linked to this type of research were taken into account and the second author conducted confirmatory interviews with 5 members of DELCAR: 2 from Innovation Purchasing Directions, 2 Innovation Project managers and 1 manager from Technology Research Direction. The data collected are mostly confidential and can be available under the control of DELCAR. For this research, we extracted data related to observed initiatives of scouting innovative ideas out of DELCAR until the first phase of its innovation process.

3.3. Data analysis

The first phase of data analysis was done through the use of the technique of "*floating attention*": all the data collected was read from beginning to the end to get impregnated by the entire material as a whole and identify recurring themes (Dumez, 2013). It led to the raising of the theme of this research through the confrontation of the result of innovation scouting actions led by the Innovation Purchasing Direction and by other actors of the firm: the same external actors were met in quite the same conditions but the observed entity was the only to provoke ACAP sequences (with the support of R&D teams). A literature review was realized. The research question was determined. In line with the data collection ethnographic-inspired methodology, a narrative approach was used to describe the observed dynamic phenomenon (Dumez and Jeunemaitre, 2006).

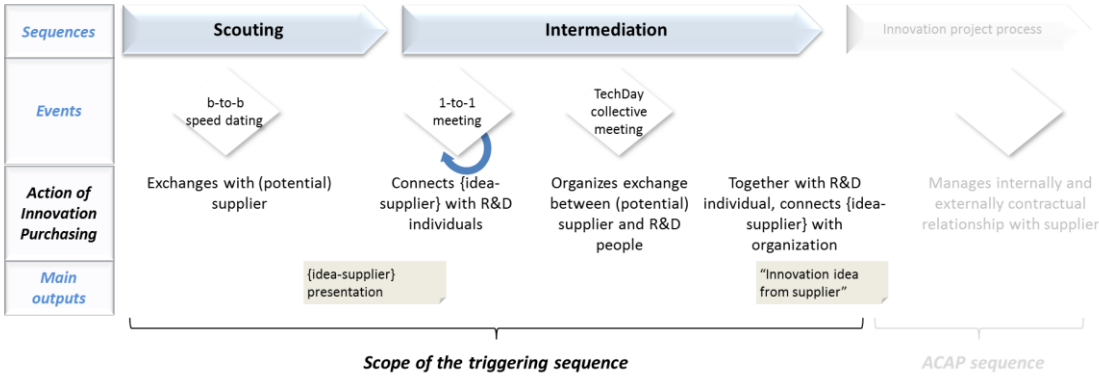
We decided to focus our narration on a triggering sequence that starts by innovation scouting through speed-dating business meetings. We defined the end of this sequence as the production of an "*Innovation idea from supplier*" which marks the recognition and understanding of potentially new knowledge outside the firm through exploratory learning, though representing the first phase of ACAP (Lane et al., 2006). The data was internally validated through the validation of the narration – which is a condition for lifting the confidentiality of data –and by the actualization of the observed process in the quality system of the studied organization – this process being validated by the Directions of Purchasing, R&D and Marketing.

4. First results

4.1. Narration of a triggering sequence

A complete triggering sequence for absorbing outside knowledge comprises a scouting sequence and an intermediation sequence [figure 2]. We focus our narration on a scouting sequence that begins with the preparation of a business-to-business speed dating day. It is a routine of the Innovation Direction members to attend to such events in order to source new innovative {idea-supplier}. These events are organized, in parallel or independently of business fairs, in order to facilitate the meetings of potentially complementary companies – mainly suppliers and client. Each event is around a main theme: industrial sector, type of material or subsystem, innovation… Before the event, each company fulfills a presentation form where it specifies its needs / offers. Each can ask for a meeting with every other company. Very before the event, each demanded company select the demanding companies it wants to meet. The day of the event, the organizer provides to each company its schedule with 0 to 16 meetings. Each meeting takes place in a dedicated box and lasts around 30 minutes.

Figure 2: implication of Innovation Purchasing in DELCAR's ACAP



Source: Servajean-Hilst & Picaud, 2014

DELCAR's Innovation Purchaser fills the form to present the company and put the following needs: get innovative {idea-supplier} to make the subsystem lighter, cheaper to produce and enhance its design. He does not need to ask for meetings, there are always between 60 and 100 demands. In two or three waves, potential supplier firms are selected: first the companies out of scope are eliminated (KIBS and firms in yet rejected specialties like bar turning), then the companies that added a dedicated message around the expressed needs and the companies that offers some targeted products or technologies (these target can be defined by R&D roadmaps or issued from informal discussions with R&D teams) are selected – at this stage there are yet 8 to 12 accepted demands on 16 meeting possibilities. Finally, the 30 to 50 other demanding companies are considered through the visit of their presentations and websites. They are selected under their potential complementarities and innovation capability.

The day of the event, supplier and client firms are meeting following the instructions given by the organizer, and by the bell ring. A typical meeting begins by the exchange of business cards followed by the presentation of the supplying firm, its technologies, its products… Then, the Innovation Purchaser presents quickly DELCAR, the needs (as written in the form), specifies the target: only for innovative ideas for DELCAR subsystem, and explains the next steps after this meeting. Sometimes at this moment (1 to 4), the two interlocutors decide to stop the meeting: mainly when the supplier offers only "on the shelf products" and has no innovation will or capacity. The following step is a provoked explanation of the potential usages of the solutions provided by the supplier firm. Both interlocutors then exchange and try to find some potential innovative ideas to present to DELCAR's R&D staffs. The meeting concludes on a recall of the next steps: more documentation, specific explanation and/or samples to send.

Back to the office – once complementary material is collected - the Innovation Purchasing department passes through the collected materials, supplier by supplier. A hierarchical list of potential innovative {idea- supplier} is made; potential inside holders of the external knowledge are targeted (mainly from R&D and rarely from Purchasing and Marketing). Following this hierarchy, a slideshow is prepared presenting briefly these innovative {idea-supplier}, with illustrations and targeted applications. This slideshow is sent to the R&D targeted people and to the Innovation and Purchasing hierarchies. This slideshow, together with supplier documentation and samples, is presented to the people from R&D in one-to-one informal and formal meetings. These presentations are done by bounces, looking for the interested people that could recognize the value of the new knowledge and hold it internally. The people met are asked for their ideas of other targets: another use of the presented technology or another internal actor of DELCAR that might be interested by the subject.

Some {idea- supplier} are eliminated because of the idea or of the supplier, or both. The presentation of the {idea- supplier} can be updated along the process.

If there is an interest for a potential {idea- supplier}, the role of the Innovation Purchasing direction is to organize a "Techday" meeting between the supplier and internal interested people: the potential "holders". This meeting is organized with them, the Innovation Purchasing Direction, people from Innovation Project and Technology Research Directions, and Commodity purchasers are invited. Such a meeting consists mainly in presenting the potential supplier to DELCAR people in 2-hour time and exchanging on stakes and processes of both companies. The objective is to explore potentials of collaboration between the two firms. Each firm presents its main respective needs and solutions to the others regarding the subjects targeted by the Innovation Purchasing Direction with the internal interested actor(s). The presentation of samples and feedbacks on the application of their solutions with other companies and/or sectors are appreciated and facilitate the increase of interest of DELCAR actors.

After such meetings, some samples can be sent to DELCAR in order to proceed to tests. When sampling is not possible or interesting – or after the test completed – the role of the Innovation Purchasing people is to meet the participants – uppermost the interested people and their managers – to have their feedbacks on the meeting and on the potential of any {idea-supplier} raised during the meeting (or further to the meeting). If there is any, an"innovation idea from supplier" form is drafted: it is filled by Innovation Purchasing and amended and approved by one R&D manager. At this stage the innovative {idea- supplier} is prepared to enter in the innovation project management process: when approved at the first stage of DELCAR innovation process, the innovation project with the supplier can be officially launched.

4.2. Analysis

In the analysis of triggering sequences that leads to a sequence of absorption by DELCAR of new external knowledge in line with its Open Innovation strategy, we find five mechanims activated by Innovation Purchasing. Four mechanims are directly related to knowledge and activated differently in the two phases of the triggering sequences: (1) selection, (2) adoption, (3) contextualization and (4) preservation of knowledge. The fifth mechanims is related to the identification and (5) enrollment of internal holders within R&D actors that early recognize the potential value of the external knowledge for DELCAR.

During the scouting sequence, the four knowledge-related mechanisms are activated by Innovation Purchasing along with external knowledge holder: the represantatives of the supplier firm. During the intermediation sequence, these mechanisms are first combined with the identification of internal holders coming from Research & Development Direction. Then, when the internal holders are identified, the knowledge-related mechanisms are activated jointly by Innovation Purchasing and R&D holders.

1st mechanism: selecting knowledge

We observed that a knowledge selection mechanism occurs throughout the triggering sequence. At the beginning of the sequence, the greatest number of possible {idea-supplier} is eliminated. Innovation Purchasing begins by evaluating roughly the compatibility of the two bases of knowledge. This evaluation is based first on the knowledge base of Innovation Purchasing. Then the evaluation is based on the knowledge base of R&D people to whom the {idea-supplier} is presented. They act as spokesmen of their area of expertise knowing the history of the recipient organization (and sometimes even the potential supplier) and

possessing the technological knowledge close to the knowledge base of the potential supplier. Finally, the selection is completed institutionally via the insertion, or not, of the {idea-supplier} in the innovation management process.

This selection is based on complementarily between the two bases of knowledge organizations, and on other criteria. The scarcity of resources available in the focal organization plays a role in the selection of {idea-supplier}: the time devoted to the discovery of new sources of knowledge by the Purchasing unit is limited as well as the time available to explore the potential of these sources by R&D. And this leads to tradeoffs based on availability of resources. If Innovation Purchasing begins by selecting knowledge during the scouting sequence, its action during the intermediation sequence consists in accompanying the selection of knowledge by R&D actors. Innovation Purchasing performs an intermediary role in collaboration with the internal network. And, this intermediation consists also in finding the appropriate time to introduce an {idea-supplier} to a potential holder, in order to limit the impact of resource scarcity but also in response to changes in technology or business strategies of the recipient organization.

2nd mechanism: adopting knowledge

During the scouting phase, the action of Innovation Purchasing consists in understanding the knowledge offered by the supplier firm. Presenting to the supplier its internal role after their meeting "*I will be your ambassador in front of DELCAR's R&D*", Innovation Purchasing invites the supplier to provide him the elements to present internally the external knowledge. Innovation Purchasing adopts the external knowledge obtaining adapted arguments on the technologies and usages potentially offered by the supplier. Through its questions and the reformulation of the answers brought by the supplier firm, Innovation Purchasing actor is first able to compare both knowledge base and then get the materials that will allow lately this comparison by DELCAR's R&D spokesmen. The demands for samples, for technical files or for additional presentations are other mechanisms of adoption of the knowledge as they provide a basis for deeper understanding and comparison.

During the intermediation phase, Innovation Purchasing plays a role of intermediary between the supplier and the internal actors that are invited to identify the value of the external knowledge for DELCAR. Innovation Purchasing during its meetings with R&D actors pushes them to explicit their own knowledge base and link it to the knowledge base relative to the presented {idea-supplier}. This mechanism of adoption of external knowledge conducts to the selection mechanism when the knowledge is recognized as potentially valuable.

3rd mechanism: contextualizing knowledge

For selected {idea-supplier}, the external potentially valuable knowledge must be translated into a form that should be understandable and seen relevant by the recipient firm actors. In that case, the mechanism of contextualization is used to facilitate the assimilation of external knowledge in order that it can fit into the standards and standard processes of the recipient organization. The mechanism of contextualization is activated alone by Innovation Purchasing during the scouting sequence. It is done through the use of samples, demonstrators, selected images or documents, transfer of videos, formulation of potential uses… This intermediate objects are used in order to present the knowledge in an understandable form to the potential internal holders.

During the intermediation phase, knowledge contextualization is adapted all through the exchanges with R&D actors and especially with those who are able to identify potential holders. Once a "Techday" meeting is accepted, Innovation Purchasing invites the targeted audience to take part to it. The supplier is briefly presented and the objects of the meeting: the

potential idea is presented in order to get the maximum participants. After the Techday, the contextualization takes a more formal part, if the {idea-source} is evaluated as potentially valuable for DELCAR: the R&D holder and Innovation Purchasing commits into a formal form. "The innovation idea from supplier" form is filled. It contextualizes institutionally the external knowledge that becomes potentially valuable "*at 60%*" for becoming a future innovation project.

4th mechanism: preservation of knowledge

The external knowledge is preserved by Innovation Purchasing through the stocking and the production of the materials provided by the suppliers or produced during the adoption and contextualization mechanisms: slideshows, business cards, technical files, samples... The preservation mechanism is also activated by Innovation Purchasing through the transfer to R&D experts of these materials to ensure that the knowledge will be kept for DELCAR by the internal reference on the concerned topics. During the TechDay events, Innovation Purchasing can contribute to valorizing external knowledge through reminding to R&D some supplier's capacities or ideas that are not spontaneously presented.

Internal knowledge is also preserved by Innovation Purchasing all along the sequence, and specifically during the direct exchanges between R&D and the supplier, through a specific attention on the disclose of confidential information. Innovation Purchasing ensures the respect of confidentiality through the evaluation with R&D spokesmen of the level of confidentiality of the topics that might lead to the proposal of a non-disclosure agreement to the supplier and to specific briefing of TechDay participants before the meeting.

5th mechanism: enrollment of holders

The mediation sequence is characterized by the social mechanisms activated by Innovation Purchasing in order to first identify the potential R&D holder(s) of the {idea-supplier} and then enable their appropriation of this external knowledge. Innovation Purchasing looks for connecting it with the people that are best equipped to recognize its value. These connections are based on official and personal networks of Innovation Purchasing and on the networks of the R&D actors that don't reject the {idea-supplier} and that relay the information or designate potential holders.

Once a holder is identified, Innovation Purchasing facilitates its engagement through a personal implication in the activation of the knowledge-related mechanisms. The holder selects the {idea-supplier} and shows its interest as a spokesman of its area of expertise. Then he contributes to the translation of external knowledge all through the sequence. Innovation Purchasing does not only ensure the connection with internal holders but also accompany their adoption of the external knowledge. And, this enrollment through their participation in the knowledge related mechanisms will later reinforce their implication on the innovation project, once validated at the firm level.

5. Discussion

Our objective was to study the mechanisms activated by an advanced purchasing function likely to trigger the absorption of external knowledge by a firm developing an Open Innovation approach. This perspective is rarely adopted mainly due to the difficulty of observing such events (Imbert and Chauvet, 2012). These authors and Whelan et al. (2011) are within the rare academics to having described and analyzed such a sequence. Their analyses were grounded on two categories of actors. The former studied a consulting firm (intermediary) and the recipient-firm (its client). The latter identified two internal roles: *"(1) Idea scouts act as the R&D unit's antennae, tuned to emerging scientific and technological*

developments that are broadcast from around the globe. (2) Connectors are the hub of the company's social network, the go-to people of the organization. Much of their expertise lies in knowing who is doing what and who can do what" (Whelan et al., 2011).

Our first results allow us to highlight the role of a single internal actor of a knowledge recipient firm that plays both roles. We identified the knowledge-related mechanisms described by Imbert and Chauvet (2012) when they were activated by an external intermediary firm: selection, adoption, contextualization and preservation of knowledge. We confirmed their activation first by an internal intermediary function and then jointly by this function and R&D actors. We also highlighted the mechanism of enrollment of these individuals being spokesmen of an internal complementary knowledge base and becoming through this mechanism allies for the potential absorption of the external knowledge. Through these findings, we meet up with the works of innovation sociologists Akrich, Callon and Latour on the necessity to interest and choose good spokespersons for innovation to succeed and on the role of intermediaries (Akrich et al., 2002a, 2002b).

Through the activation of the five described mechanisms that lead to the triggering of an ACAP sequence, the advanced purchaser of this case study merges the two roles necessary for Open Innovation, scouting and connecting. Its mean that this function can play an intermediation role in order to involve both internal potential heavy weight managers, here designed as the holders, and external organizations that may be reluctant to share their knowledge (Ben Mahmoud-Jouini and Calvi, 2004; Wynstra et al., 1999). The marginal position of an Advanced Purchasing function regarding the two actors may be an opportunity to trigger such sharing in the fuzzy front end stage of innovation, representing R&D in front of external organization and the external organization in front of R&D. And its position of "non expert" might facilitate the reception, translation and transfer of knowledge during fuzzy front end.

6. Conclusion

This study contributes to recent work on the dual role of purchasing in innovation projects (Ben Mahmoud-Jouini and Calvi, 2004; Johnsen et al., 2012; Schiele, 2010). While contribution of Purchasing to the success of innovation collaboration is considered as relatively minor regarding R&D role (Atuahene-Gima, 1995; Brattström and Richtnér, 2013; Herzog, 1974), this study may reinforce the recognition of the specificities of an Advanced sourcing unit in front of life-cycle (or strategic) sourcing (Schiele, 2010).

Our first results strongly support an "innovation intermediary" role of purchasing defined in the literature. Being part of two system, the advanced sourcing function plays the "*role of a go-between and interpreter*" (Crozier and Friedberg, 1977) between innovative suppliers and innovation units. As firm's absorptive capacity is formed from an overlap in individual members' knowledge structures as well as the transfers of knowledge across and within organizational subunits. (Roberts et al., 2012), in the triggering phase of an ACAP sequence, the advanced purchaser evaluates, prepares and realizes the first steps of this overlap – which is a role of knowledge broker. And as an interpreter being part of the two systems, he plays pivotal role in transforming an organization's resources (Ben Mahmoud-Jouini et al., 2007).

In conclusion we suggest that as the early involvement of purchasing in innovation facilitates the absorption capacity of firms, it should be considered as an important part of their Open Innovation strategies; firms might consider developing their advanced purchasing functions and promoting their intermediation role between internal and external actors of innovation.

Limitations and further avenues of research

This paper represents work in progress and has the traditional limitations associated to the methodology based on a single case study in one sector and specific context. It is a starting point for further researches. It is yet planned to investigate the themes emerging from this research through a set of in-depth case studies in other sectors. Furthermore, the data collected will be further investigated regarding the other facets of the studied functions, especially in its role during established innovation project – and the impact of this role on the position described in this paper will be questioned. Our research question and our results should also be examined in regards with an innovation scouting function positioned within R&D and Marketing, and with the level of the technological expertise of such actors.

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